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TECHNICAL REPORT

colour inside

Transmitting and receiving equipment for radiocommunication – Radio spectrum measurement method – 300-GHz spectrum measurement equipment

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TRANSMITTING AND RECEIVING EQUIPMENT FOR RADIOCOMMUNICATION – RADIO SPECTRUM MEASUREMENT METHOD – 300-GHz SPECTRUM MEASUREMENT EQUIPMENT

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The text of this Technical Report is based on the following documents:

Draft	Report on voting
103/206/DTR	103/223/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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INTRODUCTION

This document describes a high-dynamic-range spectrum measurement system to measure spectra in the frequency range 140 GHz to 300 GHz. Although millimeter-wave (mmWave) technology has high potential for both industries and users, there are no developed techniques for evaluating spectra suppressing the unwanted response generated in the measurement system. In addition, the commercialized spectrum analyser for this frequency band cannot accurately measure low power input signals due to the insufficient dynamic range while high power signals are input to the spectrum analyser simultaneously. This document describes the high-dynamic-range spectrum measurement system with low unwanted response for measuring spectra in the frequency range 140 GHz to 300 GHz, and proposes an mmWave pre-selector to suppress the unwanted response generated in the measurement system.